In response to the rejection under 35 U.S.C. §112, second paragraph, the deficiencies identified in the outstanding Office Action have been corrected herewith. The amended claims are therefore believed to be definite within the meaning of 35 U.S.C. §112, second paragraph, and no further rejection on that basis is anticipated. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work with the Examiner in a joint effort to derive mutually satisfactory claim language.[1]

The above insert to page 4 of the specification further clarifies the problem in the prior art and is not believed to add new matter to the application, but instead merely supplements the description of the related art. The other changes to the specification correct minor informalities and the changes to the specification are not believed to raise a question of new matter.

Applicant respectfully traverses the outstanding rejection on the merits, because in Applicant's view the object and operation of the invention taught by Monaghan differ from the object and operation of Applicant's invention, and the differences found in Applicant's invention are patentably distinguishing.

More particularly, an object of Applicant's claimed invention is to monitor the inflow timing of a shadowing agent while reducing the breakage of the shadowing

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[1]The objection to the "scanning means" limitation of Claims 1, 14, 24 and 27 as noted in paragraph 2 at page 2 of the Official Action is not fully understood. This limitation in the several claims has been clarified by way of the present amendment. If the basis for the rejection has not been fully addressed by the above amendment, once again the Examiner is invited to telephone the undersigned with clarification for the basis of the rejection and the undersigned will be happy to negotiate mutually acceptable language to resolve any remaining issues.

agent to a minimum possible extent and to obtain a high-contrast image of diagnostic importance in proper timing, after injection of the shadowing agent. In contrast, the object of the Monaghan invention is to obtain a contrast enhanced agent image from images obtained before and after injection of the contrast agent.

Further, in regard to the operation of Applicant's claimed invention, during a time period in which the examining human body is repeatedly scanned, the power (or frequency) of the ultrasound signal is changed between a low power (or a first frequency) and a high power (or a second frequency). After the injection of the shadowing agent into the examining human body, the inflow state of the shadowing agent is monitored, at a time of high resolution, with the use of ultrasound of a low power (or a first frequency) having a low contrast but involving less breakage against the shadowing agent. The timing at which there occurs adequate inflow of the shadowing agent is taken based on the images of a low contrast but at a time of high resolution. According to the timing of the Applicant's invention, the power (or frequency) of the ultrasound is changed to a high power (or a second frequency), by which it is possible to obtain an image of a high contrast but involving less breakage against the shadowing agent. By monitoring the inflow timing of the shadowing agent at a time of high resolution while suppressing the breakage of the shadowing agent to a minimum possible extent, it is possible to obtain a high contrast image necessary for diagnosis. Further, it is possible automatically to record high contrast image data immediately upon changing of the ultrasound from the lower power (or first frequency) to a high power (or second frequency).

As noted at column 5, lines 22-46 of Monaghan, however, Monaghan utilizes the difference in the echo's frequency characteristic between the tissue and the shadowing agent to make a comparison between a spectrum (base line) of an echo obtained at a first time period (before injection of a contrast enhancing agent) and a spectrum of an echo obtained at a second time period (after injection of the contrast enhancing agent) to obtain a contrast enhanced agent image as a result of the comparison.

In comparison to Monaghan, as recited in Applicant's claims, a changing means is provided for changing the power (or frequency) of the ultrasound between a low power (or a first frequency) and a high power (or a second frequency) during a time period in which an examining body is repeatedly scanned. Also provided is a means for automatically storing high contrast image data obtained immediately after the ultrasound is changed from the low power (or first frequency) to the high power (or second frequency). It is respectfully submitted that these features of Applicant's invention are not shown or taught by Monaghan. Instead, Monaghan in Figure 7 and at column 8, lines 30-54 discloses the concept of allowing a transducer which has a sensitivity center at a reference frequency and a transducer which has a sensitivity center at a resonant frequency of microbubbles to simultaneously receive an echo. It is respectfully submitted that the provision of these two different transducers does not suggest or render obvious changing the frequency or the power of the ultrasound time-wise, as for example recited in Claims 14 and 27. Further, the teachings of Monaghan do not teach changing the power of the ultrasound from a low power to a

high power. Accordingly, it is respectfully submitted that the object, operation, effect and arrangement of Applicant's invention are patentably distinguishable from that of Monaghan.

Consequently, in view of the present amendment, and in light of the above discussion, it is respectfully submitted that the pending claims as amended herewith are in condition for allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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